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(Modified) PTO/SB/21 (5-98)  
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# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

8

Application Number

09/725,324

Filing Date

November 28, 2000

First Named Inventor

Steven R. Leong

Group Art Unit

Unassigned

Examiner Name

Unassigned

Attorney Docket Number

02-108010US

## ENCLOSURES (check all that apply)

- ☐ Fee Transmittal Form  
☐ Fee Attached  
☐ Amendment / Response  
☐ After Final  
☐ Affidavits/declaration(s)  
☐ Extension of Time Request  
☐ Express Abandonment Request  
☒ Information Disclosure Statement  
☐ Certified Copy of Priority Document(s)  
☐ Response to Missing Parts/Incomplete Application  
☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

- ☐ Assignment Papers (for an Application)  
☐ Drawing(s)  
☐ Licensing-related Papers  
☐ Petition Routing Slip (PTO/SB/69) and Accompanying Petition  
☐ Petition to Convert to a Provisional Application  
☐ Power of Attorney, Revocation Change of Correspondence Address  
☐ Terminal Disclaimer  
☐ Small Entity Statement  
☐ Request for Refund

- ☐ After Allowance Communication to Group  
☐ Appeal Communication to Board of Appeals and Interferences  
☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  
☐ Proprietary Information  
☐ Status Letter  
☒ Additional Enclosure(s) (please identify below):  
receipt acknowledgment postcard

Authorization to Charge Deposit Account  
Please charge Deposit Account No. 50-0893 for any additional fees associated with this paper or during the pendency of this application, including any extensions of time for consideration of the documents enclosed.

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY OR AGENT

Firm or Individual name

Jonathan Alan Quine, Reg. No. 41,261, The Law Offices of Jonathan Alan Quine

Signature

Jonathan Alan Quine

Date

5-2-01

## CERTIFICATE OF MAILING

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Tracie Brooks

Date

5-3-2001



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On May 3, 2001

The Law Offices of Jonathan Alan Quine

By Heacie Brooks

Attorney Docket No. 02-108010US  
Client Ref. No. 0152.002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Steven R. Leong, *et al.*

Application No.: 09/725,324

Filed: November 28, 2000

For: CYTOKINE POLYPEPTIDES AND  
NUCLEIC ACIDS

Examiner: Unassigned

Art Unit: Unassigned

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR § 1.97 and  
§ 1.98

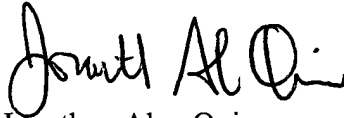
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the  
attention of the Examiner. Copies of the references are enclosed. It is respectfully requested  
that the cited information be expressly considered during the prosecution of this application,  
and the references be made of record therein and appear among the "references cited" on any  
patent to issue therefrom.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jonathan Alan Quine". The signature is stylized with a large, looped "J" and "Q".

Jonathan Alan Quine  
Reg. No. 41,261

THE LAW OFFICES OF JONATHAN ALAN QUINE  
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Alameda, CA 94501  
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JAQ:tb



Substitute Form 1449A-B/R <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>	<b>Complete if Known</b>	
	Application Number	<b>09/725,324</b>
	Filing Date	<b>November 28, 2000</b>
	First Named Inventor	<b>Steven R. Leong</b>
	Group Art Unit	<b>Unassigned</b>
	Examiner Name	<b>Unassigned</b>
	Attorney Docket Number	<b>02-108010US</b>

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	AA	5,512,463		Stemmer	04-30-1996	
	AB	5,514,588		Varadaraj	05-07-1996	
	AC	5,605,793		Stemmer	02-25-1997	
	AD	5,763,239		Short et al.	06-09-1998	
	AE	5,789,228		Lam et al.	08-04-1998	
	AF	5,811,238		Stemmer et al.	09-22-1998	
	AG	5,814,473		Warren et al.	09-29-1998	
	AH	5,824,469		Horwitz et al.	10-20-1998	
	AI	5,830,696		Short	11-03-1998	
	AJ	5,830,721		Stemmer et al.	11-03-1998	
	AK	5,834,252		Stemmer et al.	11-10-1998	
	AL	5,837,458		Minushull et al.	11-17-1998	
	AM	5,866,363		Pieczenik	02-02-1999	
	AN	5,876,997		Kretz	03-02-1999	
	AO	5,925,749		Mathur, et al.	07-20-1999	
	AP	5,928,905		Stemmer, et al.	07-27-1999	
	AQ	5,939,250		Short, Jay M.	08-17-1999	
	AR	5,939,300		Robertson, et al.	08-17-1999	
	AS	5,942,430		Robertson, et al.	08-24-1999	
	AT	5,948,666		Callen, et al.	09-07-1999	
	AU	5,958,672		Short, Jay M.	09-28-1999	
	AV	5,958,751		Murphy, et al.	09-28-1999	
	AW	5,962,258		Mathur, et al.	10-05-1999	
	AX	5,962,283		Warren et al.	10-05-1999	
	AY	5,965,408		Short, Jay M.	10-12-1999	
	AZ	5,985,646		Murphy, et al.	11-16-1999	
	BA	6,001,574		Short et al.	12-14-1999	
Examiner Signature					Date Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Substitute for form 1449A-B/PTA <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)	<b>Complete if Known</b>	
	Application Number	<b>09/725,324</b>
	Filing Date	<b>November 28, 2000</b>
	First Named Inventor	<b>Steven R. Leong</b>
	Group Art Unit	<b>Unassigned</b>
	Examiner Name	<b>Unassigned</b>
	Attorney Docket Number	<b>02-108010US</b>

	BB	6,004,788		Short	12-21-1999	
	BC	6,030,779		Short	02-29-2000	
	BD	6,054,267		Short	04-25-2000	
	BE	6,057,103		Short	05-02-2000	
	BF	6,096,548		Stemmer	08-01-2000	
	BG	6,117,679		Stemmer	09-12-2000	
	BH	6,132,970		Stemmer	10-17-2000	
	BI	6,165,793		Stemmer	12-26-2000	
	BJ	6,168,919		Short	01-02-2001	
	BK	6,171,820		Short	01-09-2001	
	BL	6,174,673		Short, et al.	01-16-2001	
	BM	6,180,406		Stemmer	01-30-2001	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	BN	WO	97/07205	✓	Novo Nordisk A/S	02-27-1997		
	BO	WO	97/20078	✓	Affymax Technologies	06-05-1997		
	BP	WO	97/25410	✓	Novo Nordisk A/S	07-17-1997		
	BQ	WO	97/35957	✓	Maxygen, Inc.	10-02-1997		
	BR	WO	97/35966	✓	Maxygen, Inc.	10-02-1997		
	BS	WO	97/44361	✓	Recombinant Biocatalysis Inc.	11-27-1997		
	BT	WO	97/48416	✓	Recombinant Biocatalysis, Inc.	12-24-1997		
	BU	WO	97/48717	✓	Recombinant Biocatalysis Inc	12-24-1997		
	BV	WO	97/48794	✓	Recombinant Biocatalysis Inc	12-24-1997		
	BW	WO	98/00526	✓	Recombinant Biocatalysis Inc	01-08-1998		

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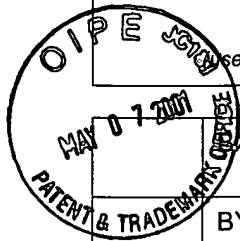
Substitute for form 1449A-B/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

Complete if Known

Application Number	09/725,324
Filing Date	November 28, 2000
First Named Inventor	Steven R. Leong
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	02-108010US

(Use as many sheets as necessary)



EX	WO	98/01581	✓		Recombinant Biocatalysis Inc	01-15-1998		
BY	WO	98/13485	✓		Maxygen, Inc.	04-02-1998		
BZ	WO	98/13487	✓		Maxygen, Inc.	04-02-1998		
CA	WO	98/24799	✓		Diversa Corp.	06-11-1998		
CB	WO	98/27230	✓		Maxygen, Inc.	06-25-1998		
CC	WO	98/28416	✓		Novo Nordisk A/S	07-02-1998		
CD	WO	98/31837	✓		Maxygen, Inc.	07-23-1998		
CE	WO	98/36080	✓		The Dow Chemical Company	08-20-1998		
CF	WO	98/41622	✓		Novo Nordisk A/S	09-24-1998		
CG	WO	98/41623	✓		Novo Nordisk A/S	09-24-1998		
CH	WO	98/41653	✓		Novo Nordisk A/S	09-24-1998		
CI	WO	98/42832	✓		California Institute of Technology	10-01-1998		
CJ	WO	98/48034	✓		Diversa Corp.	10-29-1998		
CK	WO	98/58085	✓		Diversa Corp.	12-23-1998		
CL	WO	99/07837	✓		Diversa Corp.	02-19-1999		
CM	WO	99/08539	✓		Diversa Corp.	02-25-1999		
CN	WO	99/10472	✓		Diversa Corp.	03-04-1999		
CO	WO	99/10539	✓		Diversa Corp.	03-04-1999		
CP	WO	99/19518	✓		Diversa Corp.	04-22-1999		
CQ	EP	0911396A2	✓		Maxygen, Inc.	04-28-1999		
CR	WO	99/21979	✓		Maxygen, Inc.	05-06-1999		
CS	EP	0911396A3	✓		Maxygen, Inc.	05-06-1999		
CT	WO	99/23107	✓		Maxygen, Inc.	05-14-1999		
CU	WO	99/23236	✓		Diversa Corp.	05-14-1999		
CV	EP	0934999A1	✓		Maxygen, Inc.	08-11-1999		
CW	WO	99/41368	✓		Maxygen, Inc.	08-19-1999		

Examiner Signature		Date Considered	
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Substitute for form 1449A-B/PTO

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Examiner Name	Unassigned
Attorney Docket Number	02-108010US

CX	WO	99/41369	✓	Maxygen, Inc.	08-19-1999		
CY	WO	99/41383	✓	Maxygen, Inc.	08-19-1999		
CZ	WO	99/41402	✓	Maxygen, Inc.	08-19-1999		
DA	WO	99/45154	✓	Diversa Corp.	09-10-1999		
DB	WO	99/57128	✓	Maxygen, Inc.	11-11-1999		
DC	WO	99/65927	✓	Maxygen, Inc.	12-23-1999		
DD	WO	00/42560	✓	Maxygen, Inc.	07-20-2000		
DE	WO	00/42561	✓	Maxygen, Inc.	07-20-2000		
DF	WO	00/53744	✓	Diversa Corporation	09-14-2000		
DG	WO	00/58517	✓	Diversa Corporation	10-05-2000		

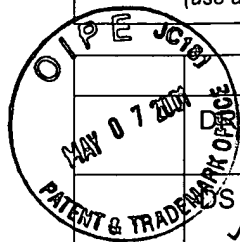
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	DH ✓	Chang, C., et al. (1999) "Evolution of a cytokine using DNA family shuffling." <u>Nature Biotechnology</u> 17:793-797.	
	DI ✓	Christians, F.C. et al., (1999) "Directed evolution of thymidine kinase for AZT phosphorylation using DNA family shuffling." <u>Nature Biotechnology</u> 17:259-264.	
	DJ ✓	Coco et al., (2001) "DNA shuffling method for generating highly recombined genes and evolved enzymes" <u>Nature Biotechnology</u> vol. 19 pp. 354-359	
	DK ✓	Crameri et al., (1993) "10(20)-Fold aptamer library amplification without gel purification," <u>Nuc. Acids Res.</u> 21(18):4410.	
	DL ✓	Crameri, A. & Stemmer W.P.C. (1995) "Combinatorial multiple cassette mutagenesis creates all the permutations of mutant and wildtype cassettes." <u>Biotechniques</u> 18:194-195.	
	DM ✓	Crameri, A. et al. (1996) "Improved green fluorescent protein by molecular evolution using DNA shuffling." <u>Nature Biotechnology</u> 14:315-319.	
	DN ✓	Crameri, A. et al. (1996) "Construction and evolution of antibody-phage libraries by DNA shuffling." <u>Nature Medicine</u> 2:100-103.	
	DO ✓	Crameri, A. et al., (1997) "Molecular evolution of an arsenate detoxification pathway by DNA shuffling." <u>Nature Biotechnology</u> 15:436-438	
	DP ✓	Crameri, A. et al., (1998) "DNA shuffling of a family of genes from diverse species accelerates directed evolution." <u>Nature</u> 391:288-291.	
	DQ ✓	Gates, C.M. et al., (1996) "Affinity selective isolation of ligands from peptide libraries through	

Examiner Signature		Date Considered	
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	Attorney Docket Number	02-108010US



	display on a lac repressor 'headpiece dimer'. <i>Journal of Molecular Biology</i> 255:373-386.	
DS	Minshull, J., Stemmer, W.P.C. (1999) "Protein evolution by molecular breeding." <i>Current Opinion in Chemical Biology</i> 3:284-290.	
CS	Ness, J. et al., (1999) "DNA shuffling of subgenomic sequences of subtilisin." <i>Nature Biotechnology</i> 17:893-896.	
DT	Patten, P.A. et al., (1997) "Application of DNA Shuffling to Pharmaceuticals and Vaccines." <i>Current Opinion in Biotechnology</i> 8:724-733.	
DU	Pelletier, Joelle N., (2001) "A Rachitt for our toolbox" <i>Nature Biotechnology</i> vol. 19, p. 314-315	
DV	Stemmer, W.P.C. (1994) "DNA Shuffling by random fragmentation and reassembly: In vitro recombination for molecular evolution." <i>PNAS</i> 91:10751	
DW	Stemmer, W.P.C. (1994) "Rapid evolution of a protein in vitro by DNA shuffling." <i>Nature</i> 370:389-391.	
DX	Stemmer, W.P.C. (1995) "The Evolution of Molecular Computation." <i>Science</i> 270:1510	
DY	Stemmer, W.P.C. (1995) "Searching Sequence Space." <i>Bio/Technology</i> 13:549-553.	
DZ	Stemmer, W.P.C. (1996) "Sexual PCR and Assembly PCR." In: <i>The Encyclopedia of Molecular Biology</i> . VCH Publishers, New York. pp. 447-457.	
EA	Stemmer, W.P.C. & Soong, N.W. (1999) "Molecular breeding of viruses for targeting and other clinical properties." <i>Tumor Targeting</i> 4:59-62.	
EB	Zhang, J. et al., (1997) "Directed evolution of an effective fucosidase from a galactosidase by DNA shuffling and screening." <i>Proceedings of the National Academy of Sciences, USA</i> 94:4504-4509.	

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